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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,857	09/22/2003	Kenji Umayahara	116675	4323
25944 7590 01/25/2007 OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER WILLS, MONIQUE M	
			ART UNIT 1745	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/25/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/664,857

Applicant(s)

UMAYAHARA ET AL.

Examiner

Monique M. Wills

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1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 13-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/22/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/19/06 + 9/22/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Claims 13-23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected fuel cell system, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on September 22, 2006. Applicant contends in accordance with MPEP 803, that "if the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions".

The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case, the process can be practiced with another materially different product, including capacitors and electrolysis cells.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art

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due to their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Claim Rejections – 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itou U.S. Pub. 2003/0150655 in view of Matoba U.S. Pub. 2004/0005487.

With respect to claim 1, Itou teaches an alert method relating to a remaining fuel amount of a fuel cell system, comprising the steps of: detecting that the state of the fuel cell system is switched over to a stopped side (par. 34); and communicating information related to the remaining fuel amount to a user when fuel of the fuel cell system is consumed in a state where the switch is switched over to a stopped side (par. 33-35). With respect to claim 2, wherein at least a step of generating an alert for the user when fuel of the fuel cell system is consumed and the remaining fuel amount falls to an alert generating

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level is included in the step of communicating information related to the remaining fuel amount (par. 35). With respect to **claim 4**, the alert is sent to an information terminal of the user using wireless communication (par. 22). With respect to **claim 5**, the generation of the alert is implemented multiple times in response to the remaining fuel amount (par. 23 & 24). With respect to **claim 6**, the alert includes information related to a remaining fuel amount (par. 33). With respect to **claim 7**, the alert generating level is set such that the possible remaining running mileage of the moving body includes a margin with respect to the distance to the nearest fuel station (par. 31).

Itou does not expressly disclose switching over operation/stopped states of the fuel cell system (**claim 1**) or implementing the alert when fuel is consumed due to the fuel cell system performing a heat-retention operation (**claim 3**).

Matoba teaches that it is conventional to employ startup/shutdown switches to control the power output of fuel cells (par. 43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to employ the shutdown switches of Matoba, in the alert method of Itou, in order to control the power output of the fuel cell.

With respect to claim 3, it would be reasonable to expect that the alert is implemented when fuel is consumed due to the fuel cell system performing a heat-retention operation, because the system is monitored immediately after shut down. During this time the fuel cell continues to retain heat.

Claim Rejections – 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itou U.S. Pub. 2003/0150655 in view of Matoba U.S. Pub. 2004/0005487 in view of Breed U.S. Pub. 2006/0212194.

Itou in view of Matoba teach an alert system as described in the rejection recited hereinabove. With respect to claim 9, the communication is conducted at every fixed time period (par. 23). With respect to claim 10, the communication is conducted when the remaining fuel amount falls to an alert generating level (par. 33-35).

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Itou does not expressly disclose communicating information related to the remaining fuel amount to an information terminal of a user at a location away from the moving body using wireless communication (claim 8). The reference does not expressly disclose the communication conducted in response to a request from the user (claim 11), or the fuel cell system stopping consumption of the fuel in response to a system stop command from the user (claim 12).

Breed teaches that it is conventional to communicate information related to a fuel level using the Internet (par. 40 & 246).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to employ the wireless Internet communication system of Breed, in the alert method of Itou in view of Matoba, in order to facilitate remote monitoring of vehicle conditions (claim 8 & 11).

With respect to claim 12, it would be reasonable to expect the fuel cell to stop consuming fuel in response to a stop command from the user.

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number

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is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.


If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Patrick Ryan, may be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MW

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